ERRATA SHEET FOR REPRINT 9/03 AND EARLIER EDITIONS
ANSI/ASHRAE/IESNA STANDARD 90.1-1999 (I-P edition)
Energy Standard for Buildings Except Low-Rise Residential Buildings

December 6, 2004

The corrections listed in this errata sheet apply to reprint identified as "86240 PC 9/03" on the outside back cover of the standard and to all earlier editions of ANSI/ASHRAE/IESNA Standard 90.1-1999, I-P edition. The outside back cover marking identifying the previous reprints are "GG 1/00", "GG 1/01", "86240 PC 2/02", ""86240 6/02", and "86240 PC 10/02". Shaded items have been added since the previous published errata sheet dated May 20, 2004 was distributed.

More than one errata sheet may be required for a specific document. Please review the entire list on the ASHRAE website related to the applicable document and download all that apply.

Page	Erratum
22	**Table 5.3.2.3, SHGC Multipliers for Permanent Projections.** In the first column titled "Projection Factor" change all of the inequality signs from less than "<" to greater than ">".
25	**Section 6. Heating, Ventilation, and Air Conditioning.** To be consistent throughout Section 6 (and with ASHRAE Standard 62) change all references to the term "outside air" to "outdoor air". At minimum this affects Sections 6.1.3c, 6.1.3e, 6.2.3.2.4, Exception to 6.2.3.2.4(b), 6.2.3.2.5, Exception to 6.2.3.2.5(a), 6.2.3.8, 6.2.3.9, 6.3.1.1.1, 6.3.1.1.3, 6.3.1.1.4, 6.3.1.2.1, Exception to 6.3.1.2.1, Exception to 6.3.2.1(a), 6.3.2.2.2a, 6.3.4.3, 6.3.6.1 and Table 6.3.1.1.3B.
45	**Exceptions to 6.3.6.1.** In exception (e) add the word "air" immediately following the word "outdoor".
78, 79 and 80	**Tables A-13, A-14, and A-15.** In the third column change the heading from "Overall U-Factor for Entire Base Wall Assembly" to "Overall U-Factor for the Entire Base Floor Assembly".
119	**Section C6.3 HVAC.** Change the terms in Equation C-3 as follows: *(Note: Deletions are shown in strikethrough and additions are shown in underline)* $HVAC_{surface} = COOL + HEAT$ (C-3) where

| | COOL | = | cooling factor for the surface calculated according to the appropriate equation in ~~C-14, C-19, or C-22~~ <u>C-14, C-19, or C-22</u> |
| HEAT | = | heating factor for the surface calculated according to the appropriate equation in ~~C-16, C-18, or C-23~~ <u>C-16, C-18, or C-23</u> |

---

120   **Section C6.7 Delta Load Factors for Mass Walls in the Exterior Building Envelope.** Change Equations CP_7 and CP_8 to read as follows:

$$CP_7 = C_{19} / (A_C^2 B^2) + C_{20} / (A_C B) + C_{21} A_C^2 / \sqrt{B} + C_{22}$$

$$CP_8 = C_8 / (A_C^2 B^2) + C_9 / (A_C B) + C_{10} A_C^2 / \sqrt{B} + C_{11}$$

Also in Section C6.7 (page 121) change Equation HP_7 to read as follows:

$$HP_7 = H_{17} / A_H^3 + H_{18}$$

---

121   **Section C6.7 Delta Load Factors for Mass Walls in the Exterior Building Envelope.** In the last paragraph of Section C6.7 (below Table C6.7B), change the third sentence as follows:

(Note: Deletions are shown in strikethrough and additions are shown in underline)

If the *U-factor* of the *mass wall* is less than 0.05 Btu/(h·ft^2·°F), th~~a~~<u>e</u>n the *U-factor* shall be set to ~~0.5~~ <u>0.05</u> Btu/(h·ft^2·°F).

---

122   **Section C6.8.1 Effective Internal Gain.** In Equation C-13 change the "x" sign to a "+" sign so that the equation now reads "G = EPD + LPDadj$_{zone}$".

---

125   **C6.10.1 U-Factor fir Below-Grade Walls.** Change Equation C-20 to read as follows:

U-factor = 1 / ((1 / C-factor) + 0.85 + R$_{soil}$)

126   **Normative Appendix D, Climatic Data.** Following the second sentence at the top of page 126 add the following:
"The following definition applies: N.A. = Not Available."

156   **Table D-3 International Climatic Data.** For Wellington, New Zealand, the value for "CDD 50" should be "2,258".